



Digital Fossil-Mining and Evolution of Squids

[Source: TH](#)

Using **digital fossil-mining techniques**, scientists have uncovered that **squids** dominated ancient oceans **30 million years earlier** than previously believed, shedding new light on their **deep evolutionary history**.

- Researchers digitally identified at least **40 species** from two modern squid groups—**Oegopsida (deep-sea squids)** and **Myopsida (coastal squids)**—in **110-70 million-year-old Cretaceous concretions** found in **Japan**.
- **Digital fossil-mining** involves using technologies like **3D scanning, CT imaging, AI, and GIS** to extract and analyze fossil data without damaging original fossils.

Squids

- **About:** Squids, belonging to the **Cephalopod class** (with octopuses and cuttlefish), have a **soft mantle**, an **internal shell (gladius)**, a **parrot-like beak**, **two tentacles** for capturing prey, and **eight arms** for holding it.
 - Like all cephalopods, they have **three hearts** and use **jet propulsion** for movement.



- **Habitat Diversity:** Squids are found worldwide, from shallow coasts to **3 miles deep**, and range in size from **tiny pygmy squids** to **giant squids** with the **largest eyes** in the animal kingdom (volleyball-sized).
- **Behavior and Intelligence:** Squids are among the most **intelligent invertebrates**, using **chromatophores** for **camouflage, communication, and predator evasion**.
 - They can **ink-spray**, and **detach arm-tips** for **distraction**, and show **social behaviors** like **cooperative hunting** (*Humboldt squid*) and **mate guarding**.

- **Technological Contributions:** They inspired **color-changing materials**, **eco-friendly self-healing packaging**, and **bio-inspired robotics**.
- **Uniqueness:** Some squids can “fly” by **gliding up to 164 feet**, show **parental care** (e.g., *bigfin reef squid*), and **mimic prey to lure food**.

Read More: [Conservation of Cephalopods](#)

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